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Douglas' Cul-de-sac.

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## AN OPERATION FOR CLOSING DOUGLAS' CUL-DE-SAC.

BY

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This operation is just what its name implies, and is accomplished by denudation of the whole or part as required of the cul-de-sac and the adjacent uterine neck, after which they are united by silver wire sutures. The conditions calling for this operation are cases of uterine flexion and version accompanied with voluminous vagina, especially in its upper portion and while most cases of either flexion or version can be remedied by a proper fitting pessary, there are cases as every one knows, which are only benefitted while the support is worn; for the simple reason that the vaginal canal is so large and its walls so weak that it cannot afford the support nature intended it should, and as soon as the artificial support is removed the uterus like a house with its underpinning taken away, falls over one way or the other. I apprehend that most cases are caused by childbirth, the muscular fibres being broken by the tension they are subjected to while the child's head is passing, and consequently the *columns* and *rugae* never again contract after the dilatation of parturition while this is often the case, there are others though of less frequent occurrence some vaginae are naturally larger than others, and out of all proportion to the uterus, and other organs of generation, these seem to have been made with the sole purpose of causing their owners trouble; like all other natural deformities: another cause of dilated and weak vaginal walls is undoubtedly attributable to inordinate sexual congress, as it is frequently seen in old women of the town who have long pursued their degrading avocations; so common is it with such females that many of them use daily injections of alum and other astringents for the purposes of contracting the canal, thus leading their patrons to think them young in the business: (there are said to be tricks in all trades, and this is one of theirs.) The operations heretofore made to remedy this condition have consisted of removing strips of mucous membrane from the walls, and then bringing the edges together, this plan does quite well for a time, but the membrane seems to stretch, and in a year or two the vagina is as large as ever, besides it has little effect on the flexed uterus as the leverage of the vagina remains nearly unchanged.

The vagina in structure is composed of a muscular coat, a layer of erectile tissue, and an internal mucous lining, besides these there is a



cushion of fat and areolar tissue which the posterior vaginal wall rests upon for two-thirds its length thus adding to its thickness and strength. Above that point or at the cul-de-sac, the walls of the vagina are unsupported, except by the recto-uterine fold of the peritoneum, which does not add to its strength, with this portion then of the vagina denuded and attached to the uterus at the extreme end the *weak place in the vagina is obliterated*, and the uterine neck made just that much thicker and stronger for the cul-de-sac portion of the vagina is attached to it, and becomes a part of it; besides the slack (if I may use a homely phrase) of the vagina is taken up and thus shortens its leverage upon the uterus preventing it from tilting forward as in ante version, and what is more important flexion is pre-

FIG. 1.—Shows: Anteverted Uterus, with dotted lines. (a) Shows portion of the vagina to be denuded. (b) The portion of uterine neck to be denuded.

Fig 1



Fig 2



FIG. 2.—Shows Anteverted Uterus with dotted lines at (a). (b) Showing points to be denuded. (a) The portion of vagina, which includes nearly the whole cul-de-sac. (b) Whole of uterine neck.

vented forward for the same reason, and the additional one that the uterine neck is thickened and strengthened. It will be noticed that the vagina is attached to the end of the uterus in this operation, just at the point where it is only supported by a fold of peritoneum instead of the rectum and cushion of fat areolar tissue, etc., as it is for the lower three-fourths, thus adding another element of strength to it. In almost all cases of flexion there is a slender and flabby neck, hence, the addition of the vaginal wall to it makes it much thicker, and as a matter of course stronger, and prevents displacement in any direction, for the reason that the uterus is anchored to a fixed point in the vagina, thus preventing it from swaying around in the pelvic cavity, as does the normal uterus, and it is only when

the attachments allow unusual motion that the organ becomes displaced; and a voluminous vagina is one of the causes of this unusual motion, consequently, when the vagina is narrowed, and the uterine neck made fast to a fixed portion of it as in this operation, movement of the uterus is necessarily limited sufficiently to prevent displacement in any direction. The first question asked will be, does not this operation prevent dilation of the uterus and vagina during pregnancy and parturition? and I can only say that I know of only one case of pregnancy following this operation, and in that one there was no trouble nor any laceration of structures; neither can I see why there should be, for the uterus and vagina dilates gradually and at the same time. I have only made this operation four

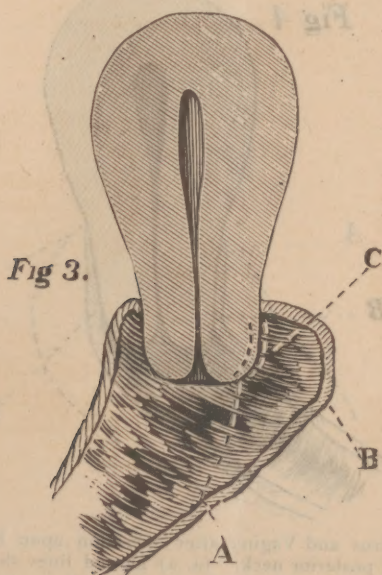


FIG. 3.—Uterus and Voluminous Vagina. (a) Shows axis of vagina after operation. (b) Faulty direction and size of vagina before operation. (c) Portion of uterine neck to be denuded, and point of new attachment of vagina.

times, but complete union took place, and the desired results were obtained in each case. I know very well that four cases does not prove the efficacy of an operation for all such conditions, but it proves its efficacy in these *four cases* and personally I believe in its feasibility in all cases of a like nature. It is unnecessary in all cases to denude this whole posterior cul-de-sac, as the object is only to shorten the posterior vaginal wall and give the uterus a steady point of support: in some cases then, it is only necessary to denude the vaginal wall opposite where it is supported by the rectum and areolar tissue, then the uterine neck is denuded and the uterus drawn down and fastened at that point, which will of course leave a por-



tion of the cul-de-sac still unattached to the uterine neck, it is only necessary to denude the whole cul-de-sac when the uterine neck is very slender and flabby. [See cut.] When the vagina is unusually voluminous and the uterine neck, very long, weak, and slender, and as liable to flex one way as the other, the vagina can be denuded upon both anterior and posterior wall and, attached to the uterine neck upon both sides, thus fixing the uterus firmly in the mesial line of the vagina. By studying the accompanying cuts, the reader will readily catch the plan of this operation. While I do not believe that any considerable number of cases of uterine displacements require this operation, I feel assured that there are a few

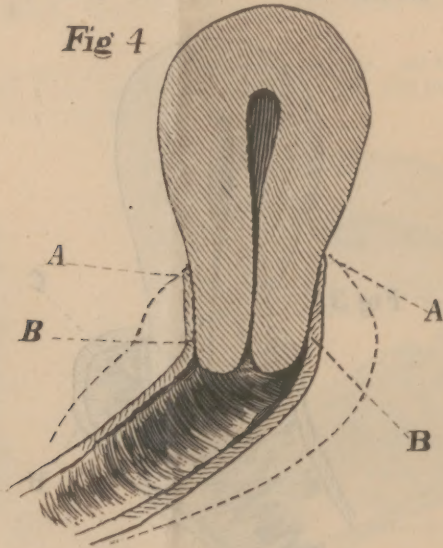


FIG. 4.—Uterus and Vagina after operation upon both anterior and posterior neck. (a. a) Dotted lines showing points of attachment and size of vagina before operation. (b. b.) Shows points of attachment and vagina after operation.

such as I have mentioned which will be benefitted by it, and these are cases that can not be permanently remedied by any pessary or uterine supporter on account of their anatomical structure. I suppose, like all other gynecological operations, this new one should be dubbed with a Latin or Greek, or a mixture of both name, not less than *four inches in length*; but I must confess that I feel unequal to the occasion, and so request that some of my professional friends who are well up in gynecological nomenclature furnish the youngster with a handle of the most approved modern length.

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